

## IN THE CLAIMS

1. (Currently amended) A method of reading out an electronic image sensor ~~(+)~~ that is subdivided into image points and wherefrom image points or groups of image points can be read out with a predetermined clock period, ~~characterized in that there are~~ and organized into at least two quantities of image points and/or groups of image points whose elements ~~are read out at a different scanning rate~~ can be read out at different scanning rates, the method comprising:

identifying a region of interest of the sensor for which the desired temporal resolution of the image is higher than that for another region of the sensor; and

separately reading each of the image points to provide an image,  
wherein the quantities of image points and/or groups of image points in the region of interest are read out at a higher scanning rate than the scanning rate for quantities of image points and/or groups of image points in the other region.

2. (Original) A method as claimed in claim 1,  
characterized in that the image points are grouped so as to form lines of a two-dimensional image and that the lines that belong to a quantity are all read out at a uniform scanning rate.

3. (Currently amended) A method as claimed in claim 2,  
characterized in that ~~the~~ lines of image points of the image are alternately assigned to at least two quantities with different scanning rates.

4 (Previously presented) A method as claimed in claim 1,  
characterized in that the quantities of image points and/or groups of image points overlap at least in a region of the image surface.

5. (Currently amended) A method as claimed in claim 1,  
characterized in that ~~the further processing~~ amplification of the signals from image points read out, ~~notably their amplification,~~ is performed in dependence on the relevant scanning rate of the image points.

6. (Previously presented) A method as claimed in claim 1, characterized in that the image sensor is sensitive to X-rays.

7. (Currently amended) A method as claimed in claim 1, characterized in that the intensity of irradiation of image points and/or the groups of image points that are read out at a lower scanning rate ~~are irradiated with a lower intensity~~ is less than the intensity of irradiation of image points that are read out at a higher scanning rate.

8. (Currently amended) A device for reading out an electronic image sensor (1) that is subdivided into image points and is provided with an addressing unit for selecting the image points and/or groups of image points to be read out within one clock period as well as with a reading unit for reading out the selected and addressed image points and/or groups of image points, characterized in that the addressing unit is arranged in such a manner that it selects the addressable image points and/or groups of image points at ~~a different scanning rate~~ different scanning rates, and the device reads out quantities of image points and/or groups of image points in a region of interest of the sensor having a higher desired temporal resolution at a higher rate than the rate at which the device reads out quantities of image points and/or groups of image points in the another region of the sensor.

9. (Canceled)

10. (Currently amended) A device as claimed in claim 8, characterized in that the reading unit is arranged in such a manner that it bases ~~the processing,~~ notably the signal amplification[[,]] on the scanning rate at which the relevant image points and/or groups of image points are addressed.

11. (New) A device as claimed in claim 8, characterized in that the image points are grouped so as to form lines of a two-dimensional image and that the lines that belong to a quantity are all read out at a uniform scanning rate.

12. (New) A device as claimed in claim 11, characterized in that lines of image points of the image are alternately assigned to at least two quantities with different scanning rates.
- 13 (New) A device as claimed in claim 8, characterized in that the quantities of image points and/or groups of image points that are read out at different rates overlap at least in a region of the image surface.
14. (New) A device for processing signals from an electronic image sensor that is subdivided into image points, comprising an addressing unit for selecting image points to be read out and a reading unit for reading out the selected image points, the device being adapted to select and read out a set of the image points to form an image having uniform spatial resolution, the set of image points including a first group of image points that is read out at a first rate and a second group of image points that is read out at a second rate, the second rate being different from the first rate.
15. (New) A device as claimed in claim 14, wherein the image points are grouped so as to form lines of a two-dimensional image, the first group of image points including a first set of lines and the second group of image points including a second set of lines.
16. (New) A device as claimed in claim 14, wherein the set of image points includes image points that at certain times are included in the first group of image points and at other times are included in the second group of image points.
17. (New) A device as claimed in claim 14, wherein the area of the image sensor containing the first group of image points overlaps the area of the image sensor containing the second group of image points.
18. (New) A device as claimed in claim 14, wherein the processing of signals from the image sensor includes amplification, and the amount of amplification of signals from the first group of image points differs from the amount of amplification of signals from the second group of image points.

19. (New) A device as claimed in claim 14, wherein the image sensor is sensitive to X-rays.